

LINEARIZING LINC AMPLIFIERS USING PRE-DISTORTION

ABSTRACT OF THE DISCLOSURE

An input signal having amplitude information is pre-distorted and converted into two pre-distorted signals without amplitude information. The two pre-distorted signals are separately amplified and then recombined to generate a linearized amplified output signal having amplitude information. The pre-distortion and conversion may be implemented using a pre-distorter and a LINC modulator. Alternatively, the pre-distortion and conversion may be implemented in circuitry that combines the functions of a pre-distorter and a LINC modulator. The amplified, pre-distorted signals are preferably combined using circuitry that provides at least some impedance matching, such as a transformer or a transmission line tee with transmission line stubs.